Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Metabolic monitoring for children and adolescents on antipsychotics: percentage of children and adolescents 1 to 17 years of age who had two or more antipsychotic prescriptions and had metabolic testing.

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of children and adolescents 1 to 17 years of age who had two or more antipsychotic prescriptions and had metabolic testing.

Rationale

Antipsychotic medications offer the potential for effective treatment of psychiatric disorders in children; however, they can also increase a child's risk for developing serious health concerns, including metabolic health complications. Antipsychotic medications are associated with a number of potentially adverse

impacts including weight gain (Correll, 2008) and diabetes (Andrade et al., 2011; Bobo et al., 2013).

A multi-year study of youth enrolled in three health maintenance organizations (HMOs) found that exposure to atypical antipsychotics was associated with a fourfold risk of diabetes in the following year, compared with children not prescribed a psychotropic medication, the broader class of medications under which antipsychotics fall (Andrade et al., 2011). Another study of youth enrolled in a state Medicaid plan found that those starting an antipsychotic had three times the risk of developing diabetes, compared with youth starting other psychotropic medications (Bobo et al., 2013). The association of atypical antipsychotics with diabetes has been found to be greater among children and adolescents than among adults (Hammerman et al., 2008).

Research suggests that metabolic problems in childhood and adolescence are associated with poor cardiometabolic outcomes in adulthood (Srinivasan, Myers, & Berenson, 2002). The long-term consequences of pediatric obesity and other metabolic disturbances include higher risk of heart disease in adulthood (Baker, Olesen, & Sorensen, 2007). Due to the potential negative health consequences associated with children developing cardiometabolic side effects from an antipsychotic medication, it is important to both establish a baseline and continuously monitor metabolic indices to ensure appropriate management of side-effects.

The American Academy of Child and Adolescent Psychiatry (AACAP) (2011) guidelines recommend metabolic monitoring, including monitoring of glucose and cholesterol levels, for children and adolescents on antipsychotic medications.

Evidence for Rationale

American Academy of Child and Adolescent Psychiatry (AACAP). Practice parameter for the use of atypical antipsychotic medications in children and adolescents. Washington (DC): American Academy of Child and Adolescent Psychiatry (AACAP); 2011. 27 p.

Andrade SE, Lo JC, Roblin D, Fouayzi H, Connor DF, Penfold RB, Chandra M, Reed G, Gurwitz JH. Antipsychotic medication use among children and risk of diabetes mellitus. Pediatrics. 2011 Dec;128(6):1135-41. PubMed

Baker JL, Olsen LW, Sorensen TI. Childhood body-mass index and the risk of coronary heart disease in adulthood. N Engl J Med. 2007 Dec 6;357(23):2329-37. [41 references] PubMed

Bobo WV, Cooper WO, Stein CM, Olfson M, Graham D, Daugherty J, Fuchs DC, Ray WA. Antipsychotics and the risk of type 2 diabetes mellitus in children and youth. JAMA Psychiatry. 2013 Oct;70(10):1067-75. PubMed

Correll CU. Antipsychotic use in children and adolescents: minimizing adverse effects to maximize outcomes. Focus (Am Psychiatr Publ). 2008;6(3):368-78.

Hammerman A, Dreiher J, Klang SH, Munitz H, Cohen AD, Goldfracht M. Antipsychotics and diabetes: an age-related association. Ann Pharmacother. 2008 Sep;42(9):1316-22. PubMed

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

Srinivasan SR, Myers L, Berenson GS. Predictability of childhood adiposity and insulin for developing insulin resistance syndrome (syndrome X) in young adulthood: the Bogalusa Heart Study. Diabetes. 2002 Jan;51(1):204-9. PubMed

Primary Health Components

Antipsychotic medications; metabolic testing; children; adolescents

Denominator Description

Children and adolescents age 1 to 17 years as of December 31 of the measurement year with at least two antipsychotic medication dispensing events of the same or different medications on different dates of service during the measurement year (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Both of the following during the measurement year:

- At least one test for blood glucose or hemoglobin A1c (HbA1c)
- At least one test for low-density lipoprotein-cholesterol (LDL-C) or cholesterol

See the related "Numerator Inclusions/Exclusions" field.

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

All HEDIS measures undergo systematic assessment of face validity with review by measurement advisory panels, expert panels, a formal public comment process and approval by the National Committee for Quality Assurance's (NCQA's) Committee on Performance Measurement and Board of Directors. Where applicable, measures also are assessed for construct validity using the Pearson correlation test. All measures undergo formal reliability testing of the performance measure score using beta-binomial statistical analysis.

Evidence for Extent of Measure Testing

Rehm B. (Assistant Vice President, Performance Measurement, National Committee for Quality Assurance, Washington, DC). Personal communication. 2015 Mar 16. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Behavioral Health Care

Hospital Inpatient

Hospital Outpatient

Managed Care Plans

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age 1 to 17 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

The measurement year

Denominator Sampling Frame

Enrollees or beneficiaries

Denominator (Index) Event or Characteristic

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Children and adolescents age 1 to 17 years as of December 31 of the measurement year with at least two antipsychotic medication dispensing events of the same or different medications on different dates of service during the measurement year. Refer to Table APM-A in the original measure documentation for a list of antipsychotic medications.

Note:

Members must have been continuously enrolled during the measurement year.
Allowable Gap: No more than one gap in continuous enrollment of up to 45 days during the measurement year.

Exclusions
Unspecified

Value Set Information
Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the NCQA Web site to purchase HEDIS Volume 2, which includes the Value Set Directory.

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Both of the following during the measurement year:

- At least one test for blood glucose (Glucose Tests Value Set) or hemoglobin A1c (HbA1c) (HbA1c Tests Value Set)
- At least one test for low-density lipoprotein-cholesterol (LDL-C) (LDL-C Tests Value Set) or cholesterol (Cholesterol Tests Other Than LDL Value Set)

Exclusions
Unspecified

Value Set Information
Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the NCQA Web site to purchase HEDIS Volume 2, which includes the Value Set Directory.

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Pharmacy data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

This measure requires that separate rates be reported for commercial and Medicaid product lines.

Report three age stratifications and a total rate:

- 1 to 5 years
- 6 to 11 years
- 12 to 17 years
- Total

The total is the sum of the age stratifications.

Standard of Comparison

not defined yet

Identifying Information

Original Title

Metabolic monitoring for children and adolescents on antipsychotics (APM).

Measure Collection Name

HEDIS 2016: Health Plan Collection

Measure Set Name

Effectiveness of Care

Measure Subset Name

Behavioral Health

Submitter

National Committee for Quality Assurance - Health Care Accreditation Organization

Developer

National Committee for Quality Assurance - Health Care Accreditation Organization

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

Financial Disclosures/Other Potential Conflicts of Interest

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Oct

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates previous versions:

National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.
National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Measure Availability

Source available for purchase from the National Committee for Quality Measurement (NCQA) Web site.

For more information, contact NCQA at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

Companion Documents

The following is available:

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical update. Washington (DC): National Committee for Quality Assurance (NCQA); 2015 Oct 1. 12 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

NQMC Status

This NQMC summary was completed by ECRI Institute on April 10, 2015.

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Production

Source(s)

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